

REMARKS

By this Amendment, applicants have amended claim 14. Claims 1, 2, 5-11, 13-16, and 18-27 are pending.

Allowed Claims

Applicants acknowledge with appreciation the Examiner's finding that claims 1, 2, 5-10, 18-24, 26 and 27 are allowed.

The only pending claims that are rejected are claims 11, 13-16 and 25.

Claim Rejection Under § 112

Claims 14-16 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for reasons set forth at page two of the Office Action. Applicants have amended claim 14, to which claims 15 and 16 depend, to overcome the basis for the § 112, second paragraph, rejection. Applicants submit that all pending claims are in full compliance with § 112.

Claim Rejections Under § 103

Claims 11 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kishi in view of Barr. Applicants respectfully traverse this § 103(a) rejection.

Claim 11 is an independent claim to which claim 13 depends. It is applicants' position that one skilled in the art would not consider combining the Kishi and Barr Patents in order to achieve applicants' claimed invention as defined in independent claim 11 because there is no motivation or suggestion in the prior art as a whole to combine these references to achieve applicants' claimed invention.

The Kishi Patent concerns a piezoelectric vibrating element as used in an electroacoustic transducer shown in Figure 9. The Examiner readily admits at page 3 of the Office Action that the Kishi Patent fails to teach the features of the support element including a conductive portion which is in electrical contact with

the piezoelectric vibrator, and an electrical input applied to the piezoelectric member via the conductive portion, causing the piezoelectric vibrator to vibrate specified in claim 11. To rectify this deficiency of the Kishi Patent, the Examiner relies on the disclosure in the Barr Patent of a microphone shown in Figure 1 which shows a wire 18 in contact with a metalization layer 15 which supports a sensor 14 of a piezoelectric material. It is the Examiner's position that one skilled in the art would substitute the wire 18 of the Barr microphone for the support element 16 in the piezoelectric vibrating element of Figure 9 in the Kishi Patent. Applicants respectfully disagree.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. If the Examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. In re Rijckaert, 9 F.3d 1531, 1532 (Fed. Cir. 1993). A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to one skilled in the art. Id. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, "absent some teaching suggestion or incentive supporting the combination." In re Bond, 910 F.2d 831, 834 (Fed. Cir. 1990). Accord, In re Roffet, 1998 U.S. App. Lexis 16414 (Fed. Cir. 1998).

Applicants contend that because the support element 16 of the Kishi Patent is an "elastic formed pad" used to remove parasitic vibration because it is an absorption damping element (see column 7, lines 9-16 of the Kishi Patent), one skilled in the art would not consider substituting the rigid metallic wire 18 of the Barr Patent for the elastic foamed pad 16 of the Kishi Patent. In other words, if one were to substitute the metallic wire 18 for the elastic foam pad 16 in Kishi, any damping effect would be lost as the combination would not meet the intended purpose sought by Kishi with respect to the piezoelectric device as shown in Figure 9 of the Kishi Patent. It is applicants' further contention that if one skilled in the art substituted the rigid metallic wire 18 for the elastic foamed pad 16 in Kishi, the Kishi piezoelectric vibrator would be inoperative. Based on the foregoing, there simply is no motivation or incentive for one skilled in the art to combine these two references in order to achieve applicants' invention as set forth in claim 11, to which claim 13 depends. Applicants, therefore, submit that the

combination of the Kishi and Barr Patents is improper and that the § 103(a) rejection of claims 11 and 13 should be withdrawn.

Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Rapps in view of Massa; claims 14 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Miki; and claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable for Miki and Massa in view of Kitanishi. Based on the amendment to claim 14, applicants respectfully traverse the § 103(a) rejection directed to claims 14-16.

Claim 14 is an independent claim to which claims 15 and 16 depend. Applicants have amended claim 14 to more clearly define applicants' invention as shown in the embodiment of Example 16 with respect to Figure 29. Amended claim 14 defines a piezoelectric loudspeaker where the "plurality of piezoelectric members are split by a conductive member and defined by visco-elastic members provided on at least one face of the piezoelectric vibrator." The features of claim 14 of (i) a plurality of piezoelectric members split by a conductive member, and (ii) defined by visco-elastic members provided on at least one face of the piezoelectric vibrator are features neither taught nor suggested in the Rapps Patent, Massa Patent, Miki Reference, and Kitanishi Patent. While these references in general, relate to piezoelectric elements, none of them teach or suggest a piezoelectric loudspeaker as defined in applicant's claim 14 which calls for a plurality of piezoelectric members split by a conductive member and defined by visco-elastic members. Lacking these features of applicants' claimed invention, these references neither separately nor in combination teach or suggest the piezoelectric loudspeaker of applicant's claim 14 and dependent claims 15 and 16. Applicants, therefore, request that the § 103(a) rejections based on these references and directed to claims 14-16 be withdrawn.

Claim 25 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Miki. Applicants respectfully traverse this § 103(a) rejection.

Claim 25 is directed to a piezoelectric loudspeaker and includes the features of the bottom face area of the visco-elastic member being equal to or greater than the bottom face area of the piezoelectric member, and the visco-elastic member covering an entire face of the piezoelectric member. The Examiner

admits at sentence bridging pages 6 and 7 of the Office Action that these features are not shown in the Miki Reference. But the Examiner goes on to reject claim 25 based on the following:

It would have been an obvious matter of design choice to so size the visco-elastic member since such a modification would have involved a mere change in size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 2377 (CCPA 1955).

Applicants note that the citation to *In re Rose* is incorrect. The correct citation is *In re Rose*, 105 USPQ 237 (CCPA 1955). Applicants contend that the Examiner has misconstrued the legal principal set forth by *In re Rose*, and has further misapplied that principal to Applicants' claimed invention.

*In re Rose* is an appeal to the Court of Customs and Patent Appeals from the Board of Appeals of the United States Patent Office. The claims in issue concern a lumber package including a plurality of bundles of lumber. The appellant argued that the claims recite that the lumber package is of an appreciable size and weight so as to require handling by a lift truck whereas the prior art packages can be lifted by hand. The CCPA stated this limitation is not patentably distinct "since it at most relates to the size of the article under consideration which is not ordinarily a matter of invention". This holding of the CCPA is directed to the size of the claimed invention.

In contrast, Applicants' claim 25 requires that the bottom face area of the visco-elastic member is equal to or greater than the bottom face area of the piezoelectric member and that the visco-elastic member covers an entire upper face of the piezoelectric member. That is to say, these features of Applicants' claimed invention are not directed to the size of a particular element of the claimed piezoelectric loudspeaker, but define the visco-elastic member relative to the piezoelectric member. Such requirement is not "a mere change in the size of a component" as stated by the Examiner. Instead, Applicants' claim 25 defines one element relative to another element of the piezoelectric loudspeaker. The defined requirements of these features are simply not taught or suggested in the Miki

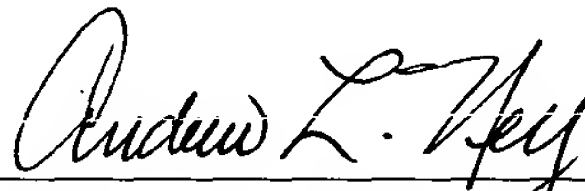
Reference. Nor does the case of *In re Rose* state that patentability cannot be based on such requirements. *In re Rose* stands for the principle that changing the size of the article under consideration is ordinarily not a matter of invention. The holding of *In re Rose* is not relevant to the above-identified features of claim 25. Claim 25 is patentably distinguished from the Miki Reference.

For the convenience of the Examiner, Applicants attach a certified translation of the Miki Reference. Nowhere in the Miki Reference is there any teaching or suggestion of the features noted above with respect to Applicants' claim 25. Furthermore, it is Applicants contention that the Miki Reference is nothing more than the teaching of a conventional piezoelectric loudspeaker as discussed in the subject specification at page 1 relative to Figure 38. Simply put, the Miki Reference merely repeats the teaching of a conventional piezoelectric loudspeaker and does not include or suggest the features of Applicants' claim 25 relative to the visco-elastic member and the piezoelectric member.

Based on the foregoing remarks, Applicants respectfully submit that claim 25 is patentably distinguished from the Miki Reference, and request that the Section 103(a) rejection of claim 25 be withdrawn.

In view of the foregoing remarks and amendments, Applicants respectfully submit that rejected claims 11, 13-16 and 25 are in condition for allowance. Reconsideration and allowance of all pending claims are respectfully requested.

Respectfully Submitted,



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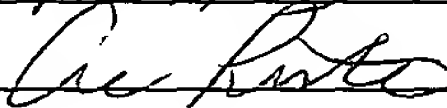
Enclosures:

Version with markings to show changes made  
Certified Translation of Miki Reference

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VERSION WITH MARKINGS TO SHOW CHANGES MADECLAIMS

- 1                    14.    (As Amended) A piezoelectric loudspeaker comprising:
- 2                    a piezoelectric vibrator including a diaphragm and a plurality of
- 3 piezoelectric members provided on at least one face of the diaphragm, the
- 4 diaphragm being vibrated by the plurality of piezoelectric members; and
- 5                    a frame for supporting the piezoelectric vibrator,
- 6                    wherein different voltages are applied to at least two of the plurality
- 7 of piezoelectric members, and
- 8                    wherein the plurality of piezoelectric members are [being defined]
- 9 split by a conductive member and defined by [at least two split sections of the]
- 10 visco-elastic members provided on at least one face of the piezoelectric vibrator.